ON THE (IN)COMPATIBILITY OF NON NEUTRAL ADJECTIVES AND MEASURE PHRASES

JENNY DOETJES
Leiden University Center for Linguistics

1 Introduction

Measure phrases may modify certain adjectives but not others, even if the adjective has an interpretation that at first sight seems to be compatible with a measure (cf. among others, Kennedy 1999, Schwarzschild 2005, Barker 2002, Winter 2005, 2009, Svenonius & Kennedy 2006). Quite in general, negative adjectives do not combine with measure phrases ((1a) vs. (1b)), and in some cases, positive adjectives also fail to combine with a measure phrase ((1c-d)).

(1) a. John is 1m50 tall
    b. #John is 1m50 short
    c. #The locket is 250 € expensive
    d. #The locket is 250 € cheap

(2) a. John is 2 cm taller/shorter than Peter
    b. The locket is 20 € more expensive/ cheaper than I thought

Whenever the measure phrase can be used, the adjective has a neutral interpretation rather than being evaluative or non neutral, as illustrated by the examples in (3).

(3) a. John is 1m50 tall $\not\rightarrow$ John is tall
    b. The table is 50 cm wide $\not\rightarrow$ The table is wide
    c. The skirt is 50 cm long $\not\rightarrow$ The skirt is long

If a positive adjective cannot combine with a measure phrase, as in (1c), it also seems to fail to get a neutral reading. One can add to this that, if a non neutral interpretation of the adjective is forced by adding *for a N*, adding measure phrases always results in unacceptability, as illustrated in (4):

(4) a. #John is 1m50 tall/short for a boy
b. #The locket is 250 € expensive/cheap for a golden jewel

Given this type of facts, theories on the incompatibility of measure phrases and negative/ non neutral adjectives usually claim that the semantics of measures is incompatible with the semantics of negative and non neutral adjectives.

However, this unconditional incompatibility cannot be maintained in view of the following Dutch example, taken from a description of the Pit, a rather low cross-road in The Hague (http://nl.wikipedia.org/wiki/Schilderswijk_(Den_Haag), August 2011):

(5) [M]Vaak stond de Put bij regenval onder water, en regelmatig reed een vrachtwagen zich klem onder het 3,70 meter lage viaduct.
'When it rained, the Pit was usually filled with water, and often a truck got stuck under the 3,70 meter low (high) viaduct'

Even though this sentence is stylistically marked (as indicated by [M]), it is not ungrammatical, at least according to a large number of speakers of Dutch.[1] Moreover, the sentence indicates that the viaduct is low, which means that the adjective has a non neutral, evaluative reading.

In the rest of this paper I will focus on structures similar to the one in (5), which, besides being counterexamples to the claim that measure phrases never combine with negative and/ or non neutral adjectives, turn out to have a number of interesting properties. In the first place, there is a contrast between (5), where the MP A combination is used in attributive position, and a sentence in which the same combination is used as a predicate. In the second place, despite the non neutral reading of the adjective in examples such as (5), *for* phrases are still not allowed, which shows that the incompatibility of measure phrases and *for* phrases is independent from the non neutral/ neutral contrast.

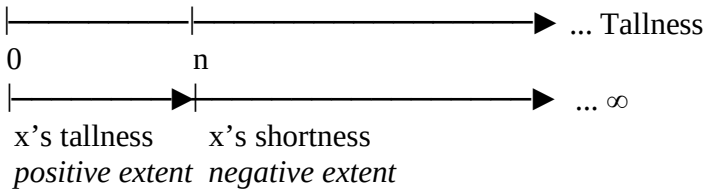
The structure of the paper is as follows. I will start with a brief overview of a number of theories on the incompatibility of measures and adjectives such as the ones in (1b-d) (section 2). Then I will turn to a long overview of the data, showing in particular that in the relevant cases the measure phrase and the adjective have to be interpreted as a single constituent and ruling out some alternative ways to interpret the data (section 3). In section 4 I will turn to a discussion of the consequences for the treatment of measures and I will give a sketch of an analysis, based on Winter (2005, 2009). Section 5 concludes the paper, and addresses some remaining issues, including the observation that Dutch seems to accept much more easily cases such as (5) than English.

2 Background

The incompatibility illustrated in (1) and (2) has often been discussed in the literature. According to Kennedy (1999), measures phrases denote bounded extents, and as such they may give a value to the standard of comparison of a gradable adjective. Positive and negative gradable adjectives differ in terms of the type of degree they introduce. Whereas positive degrees denote positive

[1] Stefan Hofstetter independently came across similar examples in German, see Hofstetter (2011, to appear).

extents, negative degrees denote negative extents, as illustrated in (6) below (see also von Stechow 1984a: 169):

(6)


Given that negative degrees are not bounded, while the extents denoted by measure phrases are, negative adjectives are incompatible with measure phrases (see also Kennedy & Svenonius 2006). As for the necessity of a neutral reading of the adjective, one can assume that *pos* (the operator that introduces the non neutral interpretation, cf. Cresswell 1976 and von Stechow 1984b) and measure phrases are mutually incompatible because they both bind the degree variable of the adjective (but see Rett 2008).

According to Schwarzschild (2005), measure phrases are predicates of intervals. Contrary to Kennedy, Schwarzschild assumes that degrees are points rather than intervals. In principle, adjectives are relations between individuals and degrees, and as such they are incompatible with measure phrases. Schwarzschild assumes that adjectives that are compatible with measure phrases have a homonym, which relates individuals to sets of degrees or intervals. The Homonym Rule is a lexical rule. This way Schwarzschild captures the fact that it seems to be lexically determined which positive adjectives are compatible with measure phrases and which are not.

(7) *Homonym Rule: from degrees to intervals*
If A has meaning A' that relates individuals to degrees then A has a secondary meaning relating individuals to sets of degrees (intervals)
The secondary meaning is given by: $\lambda I.\ \lambda x.\ I = \{d : A'(x,d)\}$,
where A'(x,d) is interpreted as "x's A-ness exceeds d"

Negative adjectives systematically fail to undergo the homonym rule, and therefore they systematically fail to combine with measures. Consider (6). If the homonym rule applied to the adjective *short*, this would result in a set with John's height as its upper bound, but without a lower bound, as John's height exceeds$_{short}$ the heights of all objects higher than John's height (Schwarzschild 2005:10):

(8) Homonym Rule applied to *short*:
$\lambda I.\ \lambda x.\ I = \{d : \text{John's height exceeds}_{short}\ d\}$

Thus, if negative adjectives were to undergo the homonym rule, the resulting interval would lack a lower bound, and this is why the rule does not apply.

Within these approaches, negative adjectives are incompatible with measure phrases in a fundamental way, as the semantics of the negative adjective is incompatible with the semantics of the measure phrase. Moreover, *pos* and measures are in complementary distribution: whenever the measure phrase is used, there is no way to use *pos* (see Barker 2002 for an implementation that does not make use of *pos*).

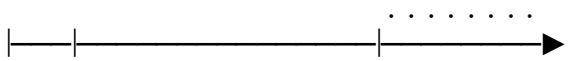
A quite different perspective on the data in (1) is offered by Winter (2005, 2009). According to Winter, illicit MP A combinations are ruled out by a triviality filter on the interpretation of measure phrases (MPs), which are analyzed as intersective modifiers:

(9) [[MP C]] = set [[MP]] intersected with set [[C]]

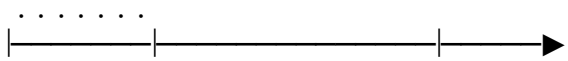
In principle measure phrases may combine with all sorts of adjectives. However, the combination of a measure phrase and an adjective results usually in a violation of a triviality filter, as the result of the combination gives rise to a logically trivial statement (see also Breakstone, this volume). A concrete example is given in (11) and (12).

(10) MP Triviality Filter:
A modified construction [MP C] is acceptable only when it is guaranteed that its denotation is not empty.

(11) a.



b.



(12) a. John is both five years old and old (trivially false)
b. John's grandfather is both 95 years old and young (trivially false)

In case the standard for being old is above five years, as depicted in (11a), the sentence in (12b) is trivially false. Similarly, if a 95 year old is not young given the relative standard for *young*, (12b) is trivially false as well. As soon as the relative standard is present, the combination of the measure phrase and the adjective may lead to a trivially false statement. However, for positive adjectives, there is a way out. In the context of a positive adjective, one may take 0 as the standard of comparison. In that case, *five years old* is fine, and the predicted reading is one in which the adjective neutral, in accordance with the facts. Shifting the standard to zero is obviously not an option for negative adjectives, as this would result in a mapping of the lower and the upper bound of the adjective. As for positive adjectives such as *expensive*, which do not combine with measure phrases either (cf. (1c)), Winter has to assume that the relative standard for these adjectives, for some reason or other, cannot be reduced to zero.

To conclude, on the basis of the analyses of MP A combinations discussed above, negative adjectives are not expected to combine with measure phrases and non neutral or evaluative interpretations are supposed to not occur in this context.

3 Licit and illicit MP A combinations in Dutch

3.1 Attributive versus predicative adjectives

In this section I will turn to a set of data from Dutch similar to (5), that show that the restrictions on MP A combinations that are assumed in the literature are too strong. Consider first the examples in (13), that illustrate the incompatibility of measure phrases and negative and neutral

adjectives in Dutch. The example in (13c) is based on Klooster (1972), who explicitly claims that this type of combinations are not allowed.

(13) a. Het water is 20 cm diep
'the water is 20 cm deep'
b. #Het water is 20 centimeter ondiep
'the water is 20 centimeters shallow'
c. #Het water is 30 graden warm
'the water is 30 degrees warm'
d. #Het water is 5 graden koud
'the water is 5 degrees cold'

However, when these MP A combinations are used in attributive rather than predicative contexts, as in (12), the result is noticeable better.[2]

(14) a. het 20 cm diepe water
the 20 cm deep water
b. [M]het 20 cm ondiepe water
the 20 cm shallow water
c. [M]het 30 graden warme water
the 30 degrees warm water
d. [M]het 5 graden koude water
the 5 degrees cold water

The contrast can be nicely illustrated by a small internet search. When searching for *"graden koude water"* 'degrees cold water' one gets pages of relevant examples similar to (14d). On the other hand, when searching for *"is * graden koud"* 'is * degrees cold' the sentences that are listed usually have a different syntactic structure (that is, the measure phrase and the adjective do not form a constituent). Similarly, even though *ondiep* 'shallow' is not as easily used as some of the other adjectives, the contrast between (13b) and (14b) is rather strong, and one can find examples such as [M]*op de bodem van de 20 meter ondiepe zee* 'at the bottom of the 20 meter shallow sea', [M]*het drie meter ondiepe super heldere water* 'the three meter shallow super clear water', [M]*die vijftien centimeter ondiepe kuil* 'that fifteen centimeters shallow pit'.[3, 4]

Note that in all of the examples in (14) except for the first one the adjective has a non neutral, evaluative reading. Whenever the predicative use of a MP A combination is odd and the

[2] Not all examples are equally acceptable for all speakers. There is a lot of inter speaker variation, and the structures in (12) are easier for some lexical items than for others. For some speakers, (12b) is not acceptable (*ondiep* is one of the harder adjectives to combine with measure phrases), but these speakers do perceive a difference between other pairs. Moreover, most people also react more strongly to (11b) than to (11c) or (11d). In all cases, and for all speakers, combinations of non neutral adjectives and measure phrases are stylistically marked as opposed to their neutral counterparts. This is indicated by the symbol [M] in front of the examples. In the rest of this paper I focus on what I consider to be the main generalizations, and I will leave a more detailed analysis of the data to future research.

[3] Sources: http://www.go2war2.nl/artikel/2233/3; http://rebelontour.blogspot.com/2010/02/union-island-trees-wordt-moeder.html; http://dasliedrecht.hyves.nl/blog/29243721/Josje_The_Story_part_1/XRW0/, december 2011.

[4] Hofstetter (2011, to appear) presents similar data in German, based on questionnaires. He does not insist on the contrast between predicative and attributive use, but also reaches the conclusion that his data are problematic for many theories on the interpretation of MP A combinations.

attributive use is much better, the latter introduces an evaluative interpretation of the adjective. In other words, an expression such as *haar 50 euro dure laptop* 'her 50 euro expensive computer' is strange as compared to *haar 2000 euro dure laptop* 'her 2000 euro expensive computer'.

A first obvious way to explain the data and to stick to the idea that measure phrases are always incompatible with negative and non neutral adjectives, is to assume that in the examples in (14), the measure does not form a constituent with the adjective.[5] Given that one cannot use several modifiers in predicative position while one can in attributive position, this would offer a straightforward explanation of the contrast between (13) and (14):

(15) a. the [big] [friendly] giant
b. *The giant is [big] [friendly]
c. [M]het [3 meter] [lage] viaduct
the three meter low viaduct
d. *Het viaduct is [3 meter] [laag]
the viaduct is three meter low

In his paper on prenominal use of measure phrases, Schwarzschild (2006) discusses examples such as *a two page poem*, *two inch cable* and *a two hour trip*, in which the measure phrase directly modifies the noun. If this type of analysis of the measure phrases in (14) were possible, the data would not show anything. However, there are a number of reasons to discard this analysis of the facts.

In the first place, prenominal measures in Dutch are only allowed in compounds, and they cannot be used as attributive modifiers, contrary to their English counterparts. The compound status can be motivated by the stress pattern of these structures on the one hand, and by the large amount of lexical restrictions that are found for these combinations on the other. Let us have a look at the stress pattern first. In a syntactic modifier N combination, the strongest phrasal stress falls on the noun, exactly as in English. If the a noun is a compound, however, word stress falls on the first member of the compound, as in **ij**zerdraad 'iron wire' or **zwem**bad 'swimming pool' and not on the noun (the stressed syllable is in bold face; note that Dutch compounds are officially written as one word). The examples in (16) show that measure N combinations in Dutch have the stress pattern of compounds. In this type of examples, a shifted stress on the syllables *bad* or *draad* can only be interpreted as a contrastive accent.

(16) a. 20 centimeter 2 **mi**llimeterdraad cf. **ij**zerdraad
20 centimeter 2 millimeter wire iron wire
'20 centimeters of 2 millimeter wire'
b. het 25 **me**terbad cf. **zwem**bad
the 25 meter pool swimming pool

As shown in (17), there is a further contrast between Dutch and English in terms of the number of felicitous combinations of MP N combinations. This can be understood if one assumes that these structures are in fact compounds, and that this type of compound formation is not very productive. In English the measure phrase is a syntactic modifier, and can be used much more freely.

[5] I actually suspect some of Hofstetter's (2011, to appear) French cases to be of this type.

(17) a. #een twee **uur**-reis — cf. **auto**reis
a two hour trip — car trip
b. #een twee **pa**ginagedicht — cf. **liefdes**gedicht
a two page poem — love poem

Turning back to our original example in (15c), it is quite unlikely that the measure is used as an independent modifier of the noun. As shown in (18), the adjective cannot be left out and the primary accent falls on the noun:

(18) a. #het [3 meter] viaduct
b. #het 3 **me**ter lage viaduct (only corrective)
c. ^{M}het 3 meter lage via**duct**

However, one might still argue that the presence of the negative adjective licenses for some reason or other the otherwise unacceptable use of a measure in a modifier position. Without speculating on what could be a reason for this type of licensing, I will show that this possibility has to be rejected on independent grounds. If the measure phrase and the adjective were separate constituents, one would expect them to be marked as separate constituents in prosody. If one pronounces a list of attributive adjectives, it is possible to use list intonation. This intonation is characterized by a high tone at the end of each adjective that modifies the noun. The contrast between (19) and (20) illustrates this for the compound *grijsgestreepte* (one constituent) and the adjective sequence *grijze gestreepte* (two constituents). In (19) there cannot be a rise at the end of *grijs*, which is not at the end of a constituent. In (20), on the other hand, there has to be such a rise, otherwise the rise on the second adjective is odd:

(19) a. het grijsgestreepte, lelijke viaduct
the grey-striped ugly viaduct (2 adjectives)
b. het grijsgesreepte]$_{H\%}$ [lelijke]$_{H\%}$ viaduct
c. #het grijs]$_{H\%}$ [gestreepte]$_{H\%}$ [lelijke]$_{H\%}$ viaduct

(20) a. het grijze, gestreepte, lelijke viaduct
the grey striped ugly viaduct (3 separate adjectives)
b. #het grijze gestreepte]$_{H\%}$ lelijke]$_{H\%}$ viaduct
c. het grijze]$_{H\%}$ gestreepte]$_{H\%}$ lelijke]$_{H\%}$ viaduct

Turning now to a case with a measure phrase, one can observe that there cannot be a rise on the measure word, which again suggests that the measure phrase and the adjective form a single constituent. In longer combinations of adjectives, the measure phrase always groups together with the adjective.

(21) a. ^{M}het 3 meter lage, lelijke viaduct
b. het 3 meter lage]$_{H\%}$ lelijke]$_{H\%}$ viaduct cf. (19b)
c. #het 3 meter]$_{H\%}$ lage]$_{H\%}$ lelijke]$_{H\%}$ viaduct cf. (19c)

To conclude, it has been shown in this section that measure phrases may combine with non neutral negative and positive adjectives when these are used in attributive position in Dutch. Moreover, there are strong arguments in favor of single constituency of the measure phrase and

the adjective in the relevant combinations. In particular, the use of prenominal measures in Dutch is restricted to compounds, the adjective cannot be left out, and the measure phrase and the adjective form a single unit from a prosodic point of view.

3.2 Predicative adjectives

Even though predicative uses as in (13b-d) above are not very good and clearly worse than the corresponding attributive cases, they are not always completely out. This is in particular true for certain combinations, such as *n jaar jong* 'n years young' which is idiomatic and emphasizes that the person is young in spirit or in behavior rather than young age. Some attested examples of predicative uses of normally illicit MP A combinations are given in (22).[6] In my perception, cases such as (22a) are completely fine with the very special interpretation for *jong*, as indicated above (this idiomatic interpretation is not necessarily present in the corresponding attributive cases). The examples in (22b,c) clearly indicate before the use of the MP A combination that the girl is tiny and the laptop ultra slim. This strong contextual anchoring of the evaluative adjective is frequent in other attested examples of this type. The use of *only* is also quite common, as well as the advertisement context as in (22c).

(22) a. Hans van Dijk 89 jaar jong!
Hans van Dijk 89 year young

b. Op 27 oktober 2010 is onze dochter Evi geboren! Ze was heel klein: 45 cm en 2230 gram licht.
'On 27 October 2010 our daughter Evi was born! She was tiny: 45 cm and 2230 grams light'

c. Deze ultraslanke notebook is slechts 2,5 cm dun.
this ultra slim notebook is only 2,5 cm thin

In my view, there is a qualitative difference between these cases and the attributive cases discussed above, in the sense that attributive cases are much easier to get than the predicative ones and less dependent on context. The predicative cases either involve idioms, as in (22a) or contain a lot of extra contextual information insisting on the lightness, thinness etc. of the qualified object or individual.

3.3 Non neutral readings and *for* phrases

A final issue I would like to address is the influence of *for* phrases. As illustrated in (23), an adjective that is otherwise compatible with a measure phrase, cannot combine both with a *for* phrase and with a measure phrase. This is not surprising, as the *for* phrase triggers a non neutral reading, and these readings are normally excluded in the context of predicative MP A combinations.

[6] Source of the examples: http://www.kieviten.nl/nl/tennis/hans-van-dijk-89-jaar-jong/; http://www.tipswerkendeouders.nl/Columns/Angela-Gijzel/dit-houd-ik-nooit-vol.html; http://www.centralpoint.nlnieuws/8692/acer-introduceert-nieuwe-aspire-timelinex-notebook-serie/.

(23) a. Het zwembad is vier meter diep/ diep voor een recreatiebad.
the swimming pool is four meter deep/ deep for a recreation pool
b. #Het zwembad is vier meter diep voor een recreatiebad.

Given that non neutral readings are acceptable in attributive position in Dutch, one would expect this type of combination to improve when used attributively. Interestingly, however, the unacceptability of the use of a measure in (24) shows that this is not the case. There is no alternative reason for the unacceptability, as the *for* phrase can be used in this type of structure in the absence of a measure, and can be combined with an adjective that is modified by a degree expression such as *erg* 'very'.

(24) het voor een recreatiebad erg/#vier meter diepe zwembad
the for a recreation pool very/four meter deep swimming pool

This is an important fact, as it shows that the incompatibility of *for* phrases and measures cannot be reduced to the non neutral evaluative reading of the adjective. Note also, that the degree of unacceptability of examples such as the one in (23b) and (24) is much higher than the degree of unacceptability of normal MP A combinations. As shown in section 3.2, even predicative cases can be found under particular conditions. As soon as a *for*-phrase is added, any MP A combination becomes completely unacceptable independently of the context or idiomatic use of the adjective.

The difference in grammatical status between cases with and without *for* phrases suggests that the source of the ungrammaticality of (30b) goes beyond the non neutral reading of the adjective. Note also that these facts are quite intriguing, given that *for* phrases and nouns modified by an attributive adjective are assumed to have similar functions in the sense that they are used to construct a context set (cf. Klein 1991). However, in the context of measures, attributive use of the adjective and the presence of a *for* phrase have an opposite effect in Dutch: while the former improves the MP A combination the latter makes it worse, and even leads to uninterpretability. It might well be the case that *for* phrases and measures are incompatible because they trigger different types of scales (cf. Fults, 2011, Sassoon, 2010, van Rooij, to appear). Measure phrases need precise, highly informative scales (cf. Sassoon's ratio scales), while adding a *for* phrase seems to result in a 'rough' type of scale (cf. Fults' analog magnitude scales). For reasons of space, I will leave this issue for further research.

4 Consequences for the analysis of measure phrases

The data discussed in the previous sections imply that a theory of measure phrases should allow for combinations of measure phrases and non neutral/ negative adjectives. This seems to be hard to derive if one assumes that the cause of the incompatibility of the measure phrase and negative adjectives is a very fundamental one in the sense that the denotation of negative adjectives is incompatible with the denotation of measure phrases, as in most proposals discussed in section 2.

Winter (2005, 2009) is an exception to this, as he does not assume that negative adjectives and measure phrases are intrinsically incompatible and argues that these combinations are prohibited because they are filtered out by means of a triviality filter. Triviality filters filter out specific combinations of items that always lead to trivially true or false statements. Note that in

Winter's implementation of the filter for MP A combinations, it is the mere possibility (rather than the necessity) of a trivial result that causes the filter to become operative. In other words, a potentially illicit MP A combination does not necessarily result in a trivially false or true statement for all possible values of the MP. As soon as there is a possible value for MP that leads to triviality the filter applies ((25) = (10)):

(25) A modified construction [MP C] is acceptable only if it is guaranteed that its denotation is not empty.

On the basis of the Dutch data presented here, this condition is too strong, at least to account for the data in this language, given that some combinations where the denotation of the MP A combination can be empty are marked rather than excluded.

Given that a triviality filter is a condition of truth conditions, one might expect that the effect of the triviality condition only obtains in case the truth value of the sentence is affected. Interesting, this roughly predicts a contrast between attributive cases, in which an adjective usually does not contribute to the truth value of the sentence, and predicative cases, in which it does. The function of a predicative adjective is normally assertive; the property denoted by the adjective is truly or falsely assigned to an independently defined individual in a particular world.[7] Attributive adjectives, on the other hand, combine with a noun and in combination with this noun they provide a set of properties, that given a particular context defines a set of individuals. The cardinality of this set depends on the context. If the set is empty, this often results in a presupposition failure rather than in trivial truth conditions.

Consider first the two sentences in (26). The first sentence is clearly odd, as it presupposes the existence of buckets that are both shallow and 1 meter deep. As this type of bucket do not exist in the actual world, the sentence gives rise to a presupposition failure, similar to the one that obtains for sentences such as *The king of France is bald*. The example in (26b) does not give rise to a presupposition failure, which explains the contrast between the two sentences.

(26) a. [M]De 1 meter ondiepe emmer is in de keuken.
the 1 meter shallow bucket is in the kitchen
b. [M]Het 1 meter ondiepe zwembad ligt achter het huis.
the 1 meter shallow pool is situated behind the house

Consider now (27), in which the MP A is embedded in a non existential indefinite noun phrase:

(27) [M]Ik zoek een 20 cm smalle boekenkast om in het hoekje naast de deur te zetten.
I look-for a 20 cm narrow book case to in the corner next to the door to put
'I look for a 20 cm wide (narrow) book case to put in the corner next to the door'

This sentence suggests that according to the speaker a book case with a width of 20 cm would be narrow, independently of whether such a book case exists in the actual world, and independently of the truth conditions of the sentence. However, one might object to this that the indefinite in this sentence can easily be interpreted as part of the focus of the sentence, and that, as such, the MP A combination should affect the truth value of the sentence.

[7] For sake of simplicity, I abstract away from cases with negative and positive quantifiers. Note that predication over negative quantifiers leads to trivially true rather than trivially false statements.

In other examples this is even more clearly the case. Take for instance the three sentences in (28). In all cases, the MP A combination is part of the predicate, and is expected to contribute to the truth conditional interpretation of the sentence. Somehow the sentence where the measure phrase is embedded in an indefinite noun phrase is better than the other two.

(28) a. [M]De Heigraaf is een anderhalve meter smalle beek.
the Heigraaf is a one and a half meter narrow brook
b. #De Heigraaf is anderhalve meter smal.
the Heigraaf is one and a half meter narrow
c. #De Heigraaf is een beek van anderhalve meter smal.[8]
the Heigraaf is a brook of one and a half meter narrow

The contrast between (28a) and (28c) is particularly interesting, as in both cases the predicate is a noun phrase. However, in (28c), the focal accent falls on the adjective, while it falls on the noun in (28a).

Given this contrast, I would like to suggest that in cases such as (28a), one still has the possibility to interpret the adjective in such a way that it contributes to the presupposition of the sentence rather than to the assertion. Even though this might seem to be stipulative at first sight, there are reasons to assume that part of a noun phrase that itself is part of the focus of a sentence can be presupposed, as long as it does not carry the focal accent. Consider the small fragment in (29):

(29) Ik zag in de verte iets gestreepts op een stoel liggen.
'At a distance I saw something striped laying on a chair.'
a. Het bleek een oud, gestreept overhemd te zijn.
'It turned out to be an old, striped shirt.'
b. Het bleek een oud overhemd met streepjes te zijn.
'It turned out to be an old shirt with stripes'

Even though *gestreept* is given in the context, it can be repeated in (29b), as part of the focused noun phrase. This example suggests that it is somehow possible to have material that is part of the ground inside the focused constituent. In (29b), where the focal accent falls on *streepjes*, this is does not seem to be possible, given the fact that (29b) constitutes a slightly odd continuation, while (29b) is completely fine in the given discourse. I would like to suggest that something similar is going on in (28a) vs. (28c). Given that presuppositions are often accommodated (cf. Beaver and Geurts, 2011 for a brief overview of the literature on this phenomenon), it seems plausible that (28a) can be saved by presupposing the information contributed by the negative adjective.

Turning back to triviality filters in general, one can observe that in most cases where it is used, the filter rules out structures that are necessarily trivial, not those that are potentially trivial (see for instance the impossibility of *every NP* in a *there* sentence by Barwise and Cooper 1981). If the triviality filter on measure phrases were of this type, there would never be a possibility to circumvent the results of the filter. Imagine that any combination of a measure phrase and a negative adjective gave rise to an empty set. In that case the escape route described above

[8] Thanks to Norbert Corver for drawing my attention to this type of example (see also Corver 2009). Note that if there is no accent on the adjective, this can only be a case of a second occurrence focus (cf. Krifka 2004).

(presupposing rather than asserting the information provided by the adjective) would not be available, as in that case the presupposition would necessarily be in conflict with the assertion. As such two aspects of Winter's analysis are relevant here: on the one hand, triviality filters filter out trivially true or false structures, and as such they may not apply to presupposed material. On the other hand, a set denoted by a given measure phrase and a set denoted by a given non neutral adjective, may have a non empty intersection. Thus, if the non neutral adjective can be presupposed, the sentence can, given an appropriate context, get a coherent interpretation, without violating the triviality filter.

I would like to end with a comment on the marked status of the examples in the text. Even in the attributive context, the examples are highly marked, and disliked by some speakers. The marked status is in most cases correlated with the existence of a unmarked alternative (cf. Klooster 1972). Note also that the set denoted by the measure phrase needs to be a proper subset of the set denoted by the adjective. The sentence in (30) is not acceptable, even if twenty or thirty cm deep water is still shallow (cf. Doetjes 2009).

(30) #het minstens 10 cm ondiepe water
the at most 10 cm shallow water

Similarly, if a positive adjective is used with a measure, it is not possible to get an interpretation where the measure phrase denotes a superset of the set denoted by the adjective. As such, the adjective is not adding any information. The measure phrase is thus the essential part of what you want to add when using a MP A combination. Adding a non neutral adjective means adding a source of potential trouble, as expressed by Winter's filter in (25). Take again the example in (28a). This sentence asserts that the Hijgraaf is a brook and that it is one and a half meters wide. At the same time, the sentence presupposes that a brook of one and a half meters wide is narrow, and this presupposition makes the sentence marked as opposed to its counterpart that contains the neutral adjective *breed* 'wide'. In (28b), on the other hand, the sentence makes two potentially conflicting claims. Only in very special cases, this yields an acceptable result (see section 3.3 above). The clearest case is the *n years young* case, where *young* seems to loose its normal interpretation. The use of this idiomatic combination indicates that one can be young at any age, which solves the potential conflict between the measure and the adjective.

5 Conclusions and issues for further research

As shown in this paper, otherwise illicit MP A combinations turn out to be acceptable in Dutch, which implies that measure phrases are not totally incompatible with non neutral adjectives and negative adjectives. The effect depends on several factors. In the first place, the syntactic position of the MP A combination matters, as there is a contrast between MP A combinations in attributive and in predicative position. In the second place, it has been shown that the presence of a *for* phrase always completely blocks the use of a measure phrase. Given that evaluative interpretations can be found in combination with measure phrases, the effect coming from the *for* phrase has to be independent from the effects found for the combination of a measure phrase and a non neutral adjective in the absence of a *for* phrase.

It has been shown that MP A combinations with negative and/or non neutral adjectives that occur in attributive positions have to be analyzed as a single constituent, and as such these data

show that measure phrases are not completely incompatible with negative adjectives nor with positive adjectives with non neutral interpretations. This is in contradiction with many theories on the interpretation of MP A combinations.

In section 4 I sketched an analysis of the data based on the theory proposed by Winter (2005, 2009). Winter claims that illicit MP A combinations are excluded because of a triviality filter. Given that his implementation of the filter is based on the lack of a guarantee of a non trivial result rather than on the complete lack of a non trivial result, it is possible to create conditions under which the filter does not apply. Given that a triviality filter is concerned with trivial truth values, it can be circumvented if it is possible to interpreted the adjective as a presupposition rather than as part of the focus of the sentence.

An important issue for further research is the fact that the type of sentences discussed in this paper seem to be much more easily available for Dutch speakers than for English speakers, despite the relative similarity of the two languages. Whereas English cases can be found on the internet, they are relatively rare (certainly as compared to their Dutch counterparts), and often seem to come from non native sources. This raises the very interesting question of where this difference comes from. Given that the combinations are rather infrequent in Dutch as well, it does not seem to be plausible that this is just a matter of language use. There might be a link between the possibility of using measures as modifiers in the prenominal domain, which is excluded in Dutch, while it is possible in English. However, it is not immediately clear how this could account for the observed asymmetry between the two languages. Furthermore, a larger cross linguistic sample should be looked at in order to see whether the correlation holds cross linguistically. Clearly, more research is needed in order to find out what the source of this difference can be.

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